THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte ANTHONY P.G. BROWN

Appeal No. 95-1998
Application 08/028,627[1]

ON BRIEF

Before THOMAS, HAIRSTON, and KRASS, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claim 10, the only claim pending.

The invention pertains to a data base management system and, more particularly, to the optimization of search queries in such a system.

Claim 10 is reproduced as follows:

10. A database system comprising:

(a) data storage means for storing a database

[1] Application for patent filed March 9, 1993. According to appellant, this application is a continuation of Application 07/625,070, filed December 10, 1990.

comprising a sequence of records, each record comprising a plurality of record fields,

(b) a host computer for generating a search query comprising a logical combination of comparison operations in a predetermined order, at least some of said comparison operations comprising a comparison between a predetermined search key and a predetermined record field.

(c) compilation means in the host computer, for pre-processing the search query by changing the order of said comparison operations within said logical combination, to thereby generate a modified search query comprising said logical combination of comparison operations in a modified order, with a substantially minimized expected cost of applying said modified search query to any individual one of said records, and

(d) dedicated search processor means, connected to the host computer and to the data storage means, for receiving the modified search query from the host computer and for applying said modified search query to each individual record in the database in turn to determine which of the records satisfy said modified search query.

The examiner relies on the following references:

Harrington et al. (Harrington)	4,901,232	Feb. 13, 1990
Tsuchida et al. (Tsuchida)	5,091,852	Feb. 25, 1992 (filed Jan. 25, 1989)

Claim 10 stands rejected under 35 U.S.C. ' 102(e) as anticipated by Tsuchida. In addition, as per a new ground of rejection entered in the answer, claim 10 stands rejected under 35 U.S.C. ' 103 as unpatentable over Tsuchida in view of Harrington.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

We reverse.

With regard to the rejection under 35 U.S.C. ' 102(e), anticipation requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference. Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir. 1983).

We do not find, in Tsuchida, the presence of, and the examiner admits as much [answer-page 4], the claimed rearrangement of the order of comparison operations within the logical combination to generate a modified search query so that there is a substantially minimized expected cost of applying the modified search query to any individual one of the records. The examiner bases his finding of such on “inherency.” More particularly, the examiner states, at page 4 of the answer, that “when a procedure is selected based upon accessing index of one of the columns [in Tsuchida], inherently, the comparison for the particular column would have been executed first because that is the first piece of information provided to the system.”

We do not agree with the examiner’s finding of “inherency.” Tsuchida is interested in choosing a particular processing procedure which leads to optimization. However, once that procedure is chosen, while it may affect the order in which

records are selected, there is no teaching or suggestion in Tsuchida that the order in which comparisons are performed within each individual record is affected in any way or that this would be inherently so.

Accordingly, we will not sustain the rejection of claim 10 under 35 U.S.C. ' 102(e) as anticipated by Tsuchida.

Turning now to the rejection of claim 10 under 35 U.S.C. ' 103, we also will not sustain this rejection. The examiner applies Tsuchida in the same manner as in the anticipation rejection but now relies on Harrington for teaching the rearranging of the order of received commands in order to select a more efficient sequence of commands which optimize the overall operation effect [answer-page 5]. The examiner takes the position that the claimed comparison operations within a logical expression, which the examiner still contends is taught by Tsuchida, constitutes a "sequence of commands." The examiner then concludes that it would have been "obvious**Y**to apply the resequencing of commands in Harrington to the comparisons in Tsuchida because Harrington… provide[s] the solution for the problem recognized by Tsuchida**Y**which would yield a better optimized search and increase the throughput of the search system" [answer-pages 5-6].

Harrington does, indeed, teach the rearranging of the execution of commands, and appellant concedes this point at page

2 of the reply brief. However, we agree with appellant that there is nothing in Harrington suggesting that these commands involve comparison operations or that the commands consist of any logical combination, as required by the instant claim. Accordingly, even if the references are combined, one would not arrive at the claimed subject matter. Moreover, as appellant points out, at page 2 of the reply brief, since Harrington is directed to solving problems of controlling communication between a host computer and I/O devices, while Tsuchida is interested in optimizing query processing in relational databases, there would appear to have been no reason for the artisan to apply the teachings of Harrington to the system of Tsuchida. The examiner never comes to grips with this argument.

The examiner's decision rejecting claim 10 under 35 U.S.C.

' 102(e) and under 35 U.S.C. ' 103 is reversed.

REVERSED

James D. Thomas Administrative Patent Judge	)	
Kenneth W. Hairston Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
Errol A. Krass Administrative Patent Judge	)	

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